

AMENDMENTS

In the Specification

The following is a marked-up version of the specification with the language that is underlined (“___”) being added and the language that contains strikethrough (“—”) or double brackets (“[[]”)] being deleted:

For the paragraph beginning at page 1, line 20:

STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT

~~The U.S. government may have a paid-up license in this invention and the right in limited circumstances to require the patent owner to license others on reasonable terms as provided for by the terms of grant no. DMR-9202879 awarded by the National Science Foundation of the U.S.~~ This invention was made with Government support under Grant No. DMR-9202879, awarded by the National Science Foundation of the U.S. The Government has certain rights in this invention.

For the paragraph beginning at page 2, line 12:

In the early days of integrated circuit fabrication, most etching was done using a wet chemical process that is quite similar to conventional photography. For example, to etch an array of grooves in a silicon wafer, the wafer is first placed in a high temperature, oxidizing environment and a layer of silicon dioxide is grown on the top surface of the wafer. Then, the oxidized wafer is covered with a thin photosensitive layer of gelatinous organic material called a "photoresist". Next, a piece of material analogous to a photographic negative, called a "photomask", is placed over the photoresist. Ultraviolet light is shined through openings in this photomask. The ultraviolet light changes the solubility of the photoresist. Thus, areas of

photoresist that have been illuminated with the ultraviolet light display a different solubility than areas which have not been exposed to the light. Finally, a solvent is used which dissolves away only the areas of the photoresist, which have had their solubility[[,]] increased by the ultraviolet light. At this point, the original pattern on the photomask has been transferred to the photoresist layer. Some people refer to this patterned photoresist layer as a "soft mask".

For the paragraph beginning at page 8, line 26:

In a variation of this third embodiment, for etching conducting substrates, the sample is placed upon the anode of a dc plasma reactor as described in commonly assigned U.S. Patent No. 5,882,538,[[,]] filed August 28, 1996 and titled "METHOD AND APPARATUS FOR LOW ENERGY ELECTRON ENHANCED ETCHING OF SUBSTRATES", however as an improvement thereon, the additional structure as described above is placed within the plasma in close proximity to the sample, thus allowing improved precise control over the flux and energy of charged species being imparted to the sample.

For the paragraph beginning at page 10, line 3:

~~In a third preferred embodiment, an additional structure, for example a grid, or a permeable cap, capable of imparting an electrical potential is placed within the plasma. This additional structure is one that is capable of being electrically biased in similar fashion to that of the mechanical support used to support the sample. This additional structure is typically placed within the plasma in close proximity to the sample to be etched. By varying the electrical bias to this structure, further control over the flux and energy of charged species, *i.e.*, electrons and ions, being imparted to the sample are achieved.~~

For the paragraph beginning at page 10, line 10:

~~In a variation of this third embodiment, and for etching conducting substrates, the sample is placed upon the anode of a dc plasma reactor as described in commonly assigned U.S. Patent No. 5,882,538, filed August 28, 1996 and titled "METHOD AND APPARATUS FOR LOW ENERGY ELECTRON ENHANCED ETCHING OF SUBSTRATES", however as an improvement thereon, the additional structure as described above is placed within the plasma in close proximity to the sample, thus allowing improved precise control over the flux and energy of charged species being imparted to the sample.~~

For the paragraph beginning at page 12, line 29:

Electrically connected to mechanical support 12 through connection 18 is AC power source 19. Connected to AC power source 19 on connection 22 is DC power source 26, which in turn is connected on line 29 to ground ~~34~~35.

Figures

Applicant has enclosed a clean copy of Figures 1, 3, and 4, each labeled as "Replacement Sheet." Figures 1, 3, and 4 are amended to replace "34" associated with "ground" with "35" to remove the duplicity in those figures with the reference numeral used for positively charged ions (i.e., also labeled "34"). A similar change has been made in the specification (i.e., a change from "34" to "35" for ground) (see, e.g., paragraph beginning at page 12, line 29).